UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,355	10/05/2006	**Kotaro Ono**	F-9183	8476

28107 7590 10/08/2009

JORDAN AND HAMBURG LLP
122 EAST 42ND STREET
SUITE 4000
NEW YORK, NY 10168

EXAMINER	
KOTTER, KIP T	

ART UNIT	PAPER NUMBER
3617	

MAIL DATE	DELIVERY MODE
10/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/588,355	ONO, KOTARO	
	Examiner	Art Unit	
	KIP T KOTTER	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-7 and 9-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-7 and 9-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2009* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following informalities:

- Reference characters are needed in the drawings to designate "a first juncture", "a first extension", "a second juncture", "a second extension", "a tire-mounting-side contour of the bead seat", "a tire-mounting-side contour of the slope wall" and "a solid rim part" as set forth in claim 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- There is no description of "a first juncture between a first extension", "a second juncture between a second extension" and a solid rim part being "defined by the first and second junctures" as set forth in claim 4.
- There is no description of the areal size of a total cross section of the tubular rim part being less than 371.5 mm^2, the first geometrical moment of inertia of the tubular rim part being more than 14,054.8 mm^4, and the second geometrical moment of inertia of the tubular rim part being more than 38,268.0 mm^4 as set forth in claim 4.
- There is no description of the areal size of the total cross section of the tubular rim part being less than 298.2 mm^2, the first geometrical moment of inertia of the tubular rim part being more than 15,117.2 mm^4, and the second geometrical moment of inertia of the tubular rim part being more than 43,636.6 mm^4 as set forth in claim 12.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-7 and 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the phrase "the European Tire and Rim Technical Organization standard or Japan Automobile Tire Manufactures Association standard" renders the claims indefinite due to the changing nature of these standards.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4-7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgartner (U.S. Patent No. 6,783,190 B1; previously cited).

Baumgartner, in the embodiment of Fig. 5, discloses a light alloy wheel comprising an outer rim having a tubular rim part, the tubular rim part comprising: a bead seat (unlabeled portion of **31**), a hump (unlabeled portion of **31**), a slope wall (unlabeled portion of **31**) and an ornamental wall (unlabeled portion of **31**), the ornamental wall being arranged on a side opposite to tire-mounting side of the outer rim as shown in Fig. 5 and bridging from a first juncture between a first extension from a tire-mounting-side contour of the bead seat and an exterior contour of the rim to a second juncture between a second extension from a tire-mounting-side contour of the slope wall and the exterior contour of the rim as shown in Fig. 5; wherein a cavity **41** is defined by the bead seat, the hump, the slope wall and the ornamental wall; an imaginary solid rim part is assumed as defined by the first and second junctures and consists of the bead seat, the hump and the

slope wall, wherein the thickness of a portion of the hollow spokes, ornamental wall , the bead seat, the hump or the slope wall is configured with a modified thickness with respect to a thickness of a remainder of the ornamental wall, the bead seat, the hump of the slope wall and the portion is comprised of a flat wall and/or a curved wall so as to increase the first and second geometrical moments of inertia as shown in Fig. 5 and described in lines 52-67 of column 1, lines 18-26 of column 2, and lines 21-33 of column 3; wherein the hollow spokes are jointed at joints to the tubular rim part, wherein the tubular rim part has an opening at each of the joints between the hollow spokes and the tubular rim part, so that cavities of the hollow spokes communicate with the cavity in the tubular rim part as shown in Fig. 5 and described in lines 5-9 of column 3 and lines 18-26 of column 3; wherein the ornamental wall is at least partly, convex outwardly as shown in Fig. 5; wherein an inner rim has a tubular rim part that is constructed as in the tubular rim part on the outer rim as shown in Fig. 5; and wherein the light alloy wheel is capable of being configured for use on a four-wheel automobile according to the European Tire and Rim Technical Organization standard or Japan Automobile Tire Manufactures Association standard so that it has a dimension in a wheel-radial direction between the bead seat and a rim well is 17.0 mm or more; an inclination of the slope wall is 20 degrees or more.

Although Baumgartner discloses a wheel that includes a tubular rim part that is formed and shaped to reduce weight and increase bending strength and rigidity as described in lines 52-67 of column 1 and lines 18-27 of column 2, Baumgartner fails to expressly disclose the shape and the thicknesses of the bead seat, the hump, the slope wall and the ornamental wall of the tubular rim part being in a range of 2.3 mm to 4 mm so that a ratio of cross-sectional area of the tubular rim part to that of the imaginary solid

rim part is no more than 100% and a first geometrical moment of inertia of the tubular rim part, about an axis that is parallel to the wheel axis and extends through centroid of a cross section of the tubular rim part, is no less than geometrical moment of inertia of the imaginary solid rim part, about an axis that is parallel to the axis of the wheel and extends through centroid of a cross section the solid rim part; and a second geometrical moment of inertia of the tubular rim part, about an axis that is vertical to the axis of the wheel and extends through centroid of a cross section of the tubular rim part, is no less than the geometrical moment of inertia of the imaginary solid rim part, about an axis that is vertical to the axis of the wheel and extends through centroid of a cross section of the solid rim part.

It would have been obvious to one having ordinary skill in the art, as a mechanical expedient, to have modified the shaping and wall thicknesses of the tubular rim part of Baumgartner so that its cross-sectional area is less than the cross-sectional area of the imaginary solid rim part and less than 298.2 mm^2 based upon the intended use of the wheel, loading, materials used, and manufacturing process used, to achieve a desired strength-to-weight ratio and to provide predictable results for decreasing the weight of the wheel.

Further, it would have been obvious to one having ordinary skill in the art to have modified the shaping and wall thicknesses of the bead seat, the hump, the slope wall and the ornamental wall of the tubular rim part of Baumgartner to be in a range of 2.3 mm to 4 mm, the first geometrical moment of inertia of the tubular rim part to be more than 15,117.2 mm^4, and the second geometrical moment of inertia of the tubular rim part to be more than 43,636.6 mm^4 as a matter of routine optimization on the part of a person of

ordinary skill in the art so that its two-dimensional geometrical moment of inertia are greater than the two-dimensional geometrical moment of inertia of the imaginary solid rim part to provide predictable results for increasing the strength and rigidity of the wheel.

Regarding claims 10 and 13, Baumgartner fails to expressly disclose at around joints augmentation and/or trim-wise rounding is made on inner faces of the hollow spokes and/or the tubular rim part.

Nonetheless, to have modified Baumgartner by rounding the inner faces of the hollow spokes and/or tubular rim part at around the joints augmentation would have been obvious to one having ordinary skill in the art to provide predictable results for preventing stress concentrations.

Response to Arguments

7. Applicant's arguments filed August 14, 2009 have been fully considered but they are not persuasive.

In response to Applicant's argument that "Baumgartner fails to teach or suggest Applicant's construction", note the claims are rejected under 35 U.S.C. 103. As noted above, Baumgartner fails to expressly disclose all of the claimed limitations. Further, it is unclear whether the term "construction" in this sentence refers to the claim language or Applicant's invention as described in the specification.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the tubular rim being in the shape of a parallelogram) are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to Applicant's arguments that "Baumgartner fails to provide a sufficient teaching or suggestion of a construction which yields the strength and the first and second geometrical moments of inertia of the light alloy construction claimed by Applicant", note again that the claims are rejected under 35 U.S.C. 103. Further, note that *KSR* forecloses the argument that a **specific** teaching, suggestion, or motivation is required to support a finding of obviousness. See *Ex parte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007)(citing *KSR*, 82 USPQ2d at 1396).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIP T KOTTER whose telephone number is (571)272-7953. The examiner can normally be reached on Mon. - Fri., 9:00 - 4:00pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571)272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. Joseph Morano/
Supervisory Patent Examiner, Art Unit 3617

/KIP T KOTTER/
Examiner, Art Unit 3617